STATEMENT OF BASIS

Geismar Plant
Praxair, Inc.
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2218
Activity Number: 20070002
Proposed Permit 0180-00031-V2

I. APPLICANT:

Company:
Praxair, Inc.
P.O. Box 230, Geismar, LA 70734

Facility:
Geismar Plant
LA Hwy 75, Ave. E, Geismar, Ascension Parish, Louisiana
Approximate UTM coordinates are 691.23 kilometers East and 3444.23 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS:

Praxair Inc. (Praxair) owns and operates an industrial gas and chemical manufacturing facility in Geismar, Louisiana under Permit No. 0180-00031-V1 issued July 18, 2003.

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application and Emission Inventory Questionnaire (EIQ), dated May 8 and November 9, 2007, was submitted requesting a minor modification and renewal of the Part 70 operating permit for the Geismar Plant.

A notice requesting public comment on the proposed permit was published in The Advocate, Baton Rouge, Louisiana, on *[Insert Date]*. The proposed permit was also sent to US EPA Region VI.

Project Description

The Geismar plant consists of the following three processes:

Specialty Gas Process: This process produces 32.85 billion standard cubic feet (scf) of hydrogen and 4.02 billion scf of carbon monoxide annually by reforming natural gas with steam over a nickel catalyst bed.

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Formaldehyde Process: This process produces 112 million pounds of up to 50 percent strength formaldehyde annually. This process uses air and methanol as raw materials. Oxygen in air is reacted catalytically with methanol to produce formaldehyde gas. The formaldehyde gas is absorbed in water and stored as up to 50% strength solutions in heated cone-roof storage tanks.

Methanol Process: This process produces 96.8 million pounds of methanol annually. Carbon monoxide, carbon dioxide and hydrogen gases are used as raw materials in this process. CO, CO_2 and H_2 are reacted in the presence of the catalyst to produce methanol.

The changes associated with the minor modification are as follows:

- Shutdown Reformer Unit 4(Emission Point No. 3-94)
- Revise Insignificant Activities to include 85% MEA Storage Tank (Emission Point No. 2-01)
- Revise NO_x emission factors for Units 1, 2, 3, and 6 Reformers. The updated factors are based on stack tests and monitoring data
- Revise maximum lb/hr for NO_x and CO emissions for Unit 6 Reformer based on stack tests and process knowledge
- Added cold box emissions for Unit 1, 2, and 6 (Emission Point Nos. 1-07, 2-07, & 3-07)
- Calculate the ammonia emissions for Reformer 6 (see Specific Requirements for EQT0036)
- Add a new emission source, Miscellaneous Steam Vents(Emission Point No. 4-07)

Permitted Air Emissions

Estimated changes in permitted emissions in tons per year are as follows:

Pollutant	Permitted	Proposed	Change
PM_{10}	66.19	64.40	-1.79
SO_2	2.33	2.23	-0.10
NO_X	289.73	312.93	+23.2
CO	226.06	243.41	+17.35
VOC	61.67	57.36	-4.31

Type of Review

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, Louisiana Comprehensive Toxic Air Pollutant Emission Control Program and NSPS. NESHAP and PSD do not apply.

MACT requirements

These regulations define maximum achievable control technology (MACT) standards for stationary source categories of hazardous air pollutants (HAPs). These HAPs were listed in the Clean Air Act Amendments of 1990.

Geismar Plant is minor source of HAPs, no MACT determination is required.

Air Quality Analysis

Air quality analysis is not conducted.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities refer to Section IX of the draft Part 70 permit.

Regulatory Analysis

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or where provided, Table X and XI of the draft permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit, or where provided, Table X and XI of the draft permit

IV. PERMIT SHIELDS

No permit shield will be granted with the proposed permits.

V. PERIODIC MONITORING

No periodic monitoring is required.

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VI. Glossary

Carbon Monoxide (CO) – A colorless, odorless gas which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

National Emission Standards for Hazardous Air Pollutants (NESHAPs) - The NESHAPs were originally required by the 1970 Clean Air Act (CAA). These standards were developed for sources and source categories that were determined to pose adverse risk to human health by the emission of hazardous air pollutants (HAPs). The standards are set "at the level which ... provides an ample margin of safety to protect the public health from such hazardous air pollutant." These risk-based NESHAPs are located in 40 CFR 61. The NESHAPs program applies to all existing and new/modified sources. Congress directed EPA to develop a program to develop further the regulation of HAPs in Section 112 of the 1990 Clean Air Act Amendments (CAAA). While the standards for major sources of HAPs developed per this section are also designated as NESHAPs, they are established according to Maximum Achievable Control Technology (MACT). These technology-based NESHAPs are located at 40 CFR 63.

Nitrogen Oxides (NO_x) - Compounds whose molecules consist of nitrogen and oxygen.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: $\geq$ 10 tons per year of any toxic air pollutant; $\geq$ 25 tons of total toxic air pollutants; and $\geq$ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10}- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO2) – An oxide of sulphur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.

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PPM CONSULTANTS, INC.

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May 8, 2007

Dr. Chuck Carr Brown
Assistant Secretary
Louisiana Department of Environmental Quality
Office of Environmental Services
P.O. Box 4313
Baton Rouge, LA 70821-4313

Re: **Title V Air Permit Modification/Renewal Application**
Praxair, Inc.
Geismar Plant
Agency Interest No. 2218
Air Permit No. 0180-00031-V1

Dear Dr. Brown:

On behalf of Praxair, Inc., PPM Consultants, Inc., is submitting an original and two copies of the Title V Air Permit Modification/Renewal Application for the referenced air permit. This application is being submitted 180 days prior to the permit expiration date of July 18, 2008. Therefore, the terms and conditions of Permit No. 0180-00031-V1 shall remain in effect until the Louisiana Department of Environmental Quality takes final action on the enclosed application for authorization renewal.

As required by Paragraph VII on page 14 of the April 6, 2006 Compliance Order, the use of the upstream NO_x CEMS and the specified method of calculating ammonia emissions for Reformer 6 are incorporated into Table 2.3 of the referenced application.

If you have any questions, or require any additional information regarding this matter, please contact James Price at (225) 673-5113 or me at (225) 293-7270.

Sincerely,

Cindy C. Thompson

Cindy C. Thompson
Project Director

Cc w/encl:

Mr. David Neleigh (6PD-R)
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Mr. James A. Price
Praxair, Inc.
P.O. Box 230
Geismar, LA 70734